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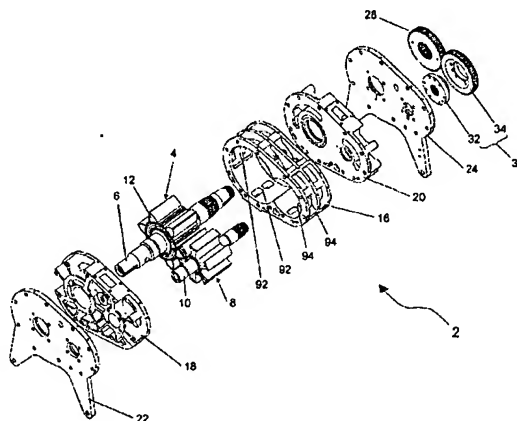
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(54) Title: A ROTARY ENGINE



(57) Abstract: A rotary engine (2) comprises a housing (16) having a male rotor (4) having a plurality of projecting lobes (12) and a female rotor (8) having a plurality of cavities (14). The male (4) and female rotors (8) are mounted for synchronous rotation about parallel axes such that during rotation successive lobes (12) on the male rotor (4) mate with successive cavities (14) on the female rotor (8) to define therewith a combustion chamber (26) in which a mixture of air and fuel is compressed by the interaction of the lobe (12) and the cavity (14) during rotor rotation. At least one exhaust port (78, 80) leads out of the housing (16) for discharge of exhaust gases from the cavity (14) of the female rotor (8) following combustion and from the space (74) between adjacent lobes (12) of the male rotor (4) following combustion. Respective purge ports (44, 46) lead out of the housing (16) downstream of the exhaust port (78, 80) in the direction of rotor rotation to facilitate discharge of residual exhaust gases from the cavity (14) and inter-lobe space (74), the purge ports (44, 46) being associated with air inlet ports (48, 50) to admit air into the cavity (14) and inter-lobe space (74) in preparation for the subsequent combustion cycle.

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